

**ABSTRACT OF THE DISCLOSURE****VARIABLE PHASE-SHIFTING CIRCUIT, PHASE INTERPOLATOR  
INCORPORATING IT, AND DIGITAL FREQUENCY SYNTHESIZER  
INCORPORATING SUCH AN INTERPOLATOR**

A variable phase-shifting circuit comprises an input for receiving an input signal having a specified oscillation frequency, an output for delivering an output signal having the same oscillation frequency and having a variable phase shift with respect to the input signal, and at least a control input. The control input receives a control signal that controls the phase shift of the output signal with respect to the said input signal. The circuit includes a synchronized oscillator with a synchronization input coupled to the input of the phase-shifting circuit for receiving the input signal, at least an output coupled to the output of the phase-shifting circuit for delivering the output signal. The synchronized oscillator has a variable free-running oscillation frequency which is controlled by the control signal. Application is proposed to phase interpolation and digital frequency synthesis.